



# Optivity Telephony Manager for Meridian SL-100

## Features and Benefits

- Simplifies Meridian SL-100 switch management and maintenance
- Reduces total cost of ownership for large-scale Meridian SL-100 networks
- Provides single-point access to switch equipment inventory and switch events, plus extensive event storage
- Automates Meridian 3900 phone set maintenance
- Features instant event notification for network managers and operators
- Reduces the complexity of managing disparate networks through integration with other Optivity applications

Nortel Networks Optivity\* Telephony Manager for Meridian\* SL-100 is the management platform designed for the Meridian SL-100 communications system. A powerful, scalable solution that supports the requirements of installations with up to 100,000 lines, Optivity Telephony Manager reduces the complexity of managing large voice networks and helps administrators achieve better system performance. An enhanced version of Meridian SL-100 Switch Manager 1.0, Optivity Telephony Manager for Meridian SL-100 replaces Switch Manager. The new application offers additional element management and network management capabilities, and provides administrators with superior reach across IP networks.

The application features an intuitive, easy-to-use Java-based management console, enabling network managers to configure, control, and manage the Meridian SL-100 switch from any LAN workstation. When integrated with Optivity Network Management System and other Optivity applications, Optivity Telephony Manager contributes a key component to building a Unified Management installation that will deliver comprehensive management of converged telephony and data networking infrastructures.

Optivity Telephony Manager introduces enhanced capabilities for intelligent peripheral equipment and telephony devices, providing single-point access for:

- Connectivity to the Meridian SL-100,
- Connectivity to associated telephony elements, and
- Alarm and event collection, processing, distribution, and notification.

The advanced Optivity Telephony Manager application includes key features designed to enhance system performance. Reduced SNMP messaging prevents management traffic from using up valuable system bandwidth, maintaining maximum throughput. Increased data handling capacity for events monitoring and equipment inventory maintenance provides greater control over telephony networks, delivering optimum performance. These features enable companies to manage and maintain their communications networks in a more cost-effective manner.

## Unified Management

To facilitate management of converged networks integrating voice, video, and data, Nortel Networks introduced Unified Management. This approach provides a straightforward and pragmatic way of exposing and solving complex network issues. Through Unified Management, enterprises can leverage campus and WAN convergence, application and infrastructure convergence, and voice and data convergence to achieve greater efficiency and reduce operational costs.

By leveraging its position as the industry leader in campus, WAN, and telephony management, Nortel Networks is streamlining the transition from the disparate data and voice networks of the past to the converged environments of the future. Unified Management provides a comprehensive solution in three areas — network management, policy management, and service-level management.

Unified Management brings the following core values to the enterprise network manager:

- Managing campus, WAN, and voice networks as an integrated system.
- Delivering pragmatic, directory-based policy management.
- Monitoring and enforcing end-to-end application service levels.
- Application optimization.
- Operational simplicity.

Nortel Networks supplies key management tools in the following areas:

### Unified Network Management

Unified Network Management provides fault management, configuration management, performance analysis, planning, and access-level security. Network managers can gain visibility into diverse network equipment and resources to optimize performance, develop and deliver new services, leverage new products and technologies, and reduce operational costs. Campus, wide-area, and telephony management can be smoothly integrated to create a comprehensive Unified Management solution.

### Unified Policy Management

Unified Policy Management gives organizations the ability to allocate network resources according to business objectives, and includes the tools to easily provision, enforce, and verify network policies across the network. Unified

Policy Management enables bandwidth management, Quality of Service (QoS), application-level security, Internet Protocol (IP) address management, and dynamic configuration. This standards-compliant, multi-vendor solution supports the differentiation of traffic flows according to business priorities so that network investments can be closely aligned with business goals.

### Unified Service Management

This solution provides service-level management in enterprise environments, ensuring that business-critical applications are receiving expected service levels. Unified Service Management supports end-to-end application performance monitoring. In addition, Unified Service Management offers a predictable, guaranteed approach to delivering and monitoring service levels. It supports the measurement of end-to-end application performance and validation of QoS levels.

### Converging Telephony and Data Management

Companies with PBX-based telephony networks look for the cost savings and efficiencies that IP-enabled networks will bring. However, in environments containing large networks of widely distributed systems, companies have been unable to obtain a single, consolidated view of the network. This system-level perspective is crucial for companies that need to see how their networks are interacting.

Optivity Telephony Manager for Meridian SL-100 is a key building block in the management of converged telephony and data networks, allowing network operations to be simplified and total cost of ownership contained. By achieving the powerful synergy between concurrent

installations of Optivity Telephony Manager for Meridian SL-100, Optivity Telephony Manager for Meridian 1, and Optivity Network Management System, network managers can take advantage of a system-level view of the network and plan for network expansion and convergence.

## Features and Benefits

### Client-Server Architecture

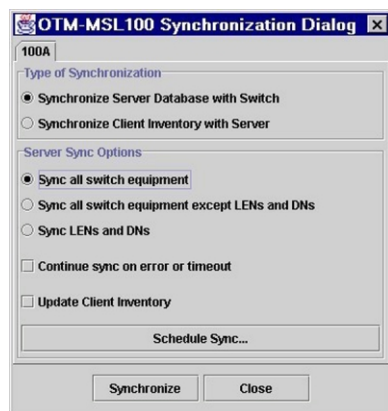
Switch Manager, the precursor to Optivity Telephony Manager for Meridian SL-100, was restricted by having all functional elements (Java Runtime Environment (JRE), application classes, and databases) running on the same machine. In contrast to this approach, Optivity Telephony Manager uses a distributed client/server architecture for increased scalability and performance. This reduces the number of SNMP requests the switch has to process, preserving system bandwidth and increasing overall performance.

### Switch Synchronization

An accurate, up-to-date view of the switch is provided through automatic updates of the Optivity Telephony Manager Server's equipment properties received from the Meridian SL-100 Switch (see Figure 1). Information about switch hardware, known as managed objects, is stored in the server database. Managers can choose to synchronize:

- All managed objects,
- All managed objects, except LENS (Line Equipment Numbers) and DNs (Directory Numbers), and
- LENS and DNs only.

Figure 1: Switch Synchronization.

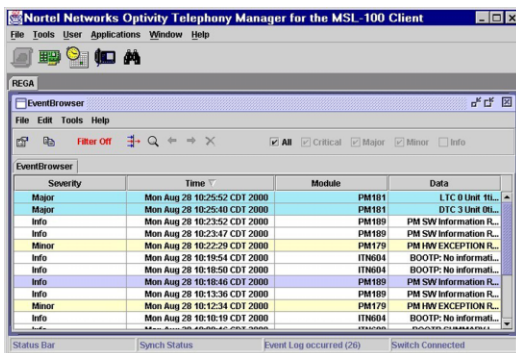


The process of selective synchronization reduces the time required to reconfigure the switch when changes need to be made to individual devices. By utilizing the scheduler functionality between the client and the server, the system administrator can synchronize each type of managed object (nodes, links, trunks, carriers, etc.) separately and at specific times of the day.

### Event Watcher Services

Network managers can use the Event Watcher Services feature to select and prioritize switch events, and then specify the actions that should be taken based on the attributes of these events. Optivity Telephony Manager also features the capability to sound an audible alarm or send e-mail notifications to other systems when specified log events occur.

Figure 2: Event Browser.



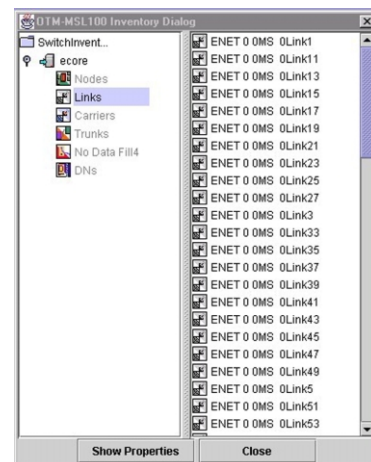
### Event Browser

The Event Browser tool simplifies the monitoring of event data received from the switch or retrieved from the Meridian SL-100 Server database (see Figure 2). In addition, this useful tool provides managers with querying and filtering capabilities that report events based on level of severity, time stamp (day/time), module (log name and number), and log-event text content. The Optivity Telephony Manager architecture uses an Object Oriented Database Management System (OODBMS), and can store more than 500 MB of event logs.

### Switch Inventory and Status

The Switch Inventory and Status feature provides synchronized updates of all equipment status information in the server database. Optivity Telephony Manager supplies a complete equipment inventory display that is organized by category and updated on demand. A navigation tree enables network managers to quickly move between a system-level perspective and the device level. (see Figure 3).

Figure 3: Switch Inventory and Status.





## Scheduler Services

Optivity Telephony Manager offers useful scheduling services for flexible switch management. Key services can easily be scheduled, including:

- Event log archiving,
- Meridian 3900 firmware downloads, and
- Switch database synchronization.

The main scheduler window is an easy-to-use graphical user interface that displays all of the scheduled activities. Execution times can be changed and updated from this window, using date-time stamps and specifying the service function that needs to be implemented (see Figure 4).

## Optivity Telephony Manager for Meridian 1 and Optivity Network Management System Integration

The Optivity Telephony Manager for Meridian SL-100 server can convert Meridian SL-100 events to the Nortel Networks Open Alarms format. These events can then be forwarded to the network management system. This feature is primarily used to redirect alarm notifications to environments containing Meridian 1 systems running the Optivity Telephony Manager for Meridian 1 application. Alarms are then forwarded from Optivity Telephony Manager for Meridian 1 to Optivity Network Management System, the industry-leading enterprise management solution from Nortel Networks.

## Load Management

Optivity Telephony Manager for Meridian SL-100 provides load management capabilities for the Enhanced Intelligent Peripheral Equipment (EIPE) EXPEC controller cards. By delivering a single display for different EXPEC cards, the software enables managers to identify, distribute, or delete loads from individual cards to fine-tune system performance. Load transfers can be implemented while the switch is in service or scheduled for periods of reduced network traffic. In addition, network administrators can manage loads on different EXPECs by setting up a bootable load.

## M3900 Meridian Digital Telephone Firmware Maintenance

Optivity Telephony Manager for Meridian SL-100 provides firmware management and maintenance for the M3900 Series Meridian digital telephones and call center device. Management of firmware loads for the M3900 series products is supported by the EIPE (EXPEC) controller cards. Supported terminal types include the M3902, M3903, and M3904 Meridian digital telephones, and the M3905 Meridian

Call Center. The firmware management and maintenance feature enables managers to view the firmware load version on multiple EIPE cards from one view, and sort them based on M3900 set type, firmware version, LEN, or DN. Transfer of multiple sets on multiple EIPEs can be scheduled to occur during periods of reduced call volume.

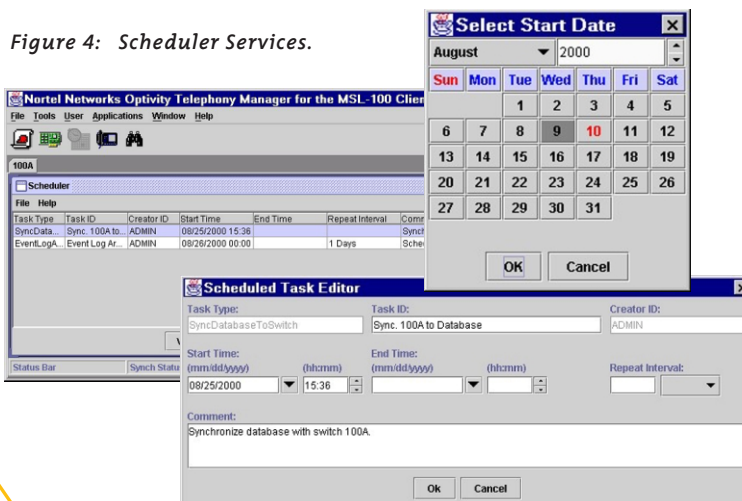
## Single Management Platform

While other vendors offer multiple management applications that run on disparate operating systems to support different products, releases, and applications, Optivity Telephony Manager provides comprehensive management services from a single management platform. Optivity Telephony Manager server runs on Windows NT 4.0 with SP5.

## Evergreen Network Evolution

Nortel Networks supports an evergreen evolutionary network strategy designed to preserve investments in network equipment made by corporations, educational institutions, and health-care facilities. This ensures that Nortel Networks customers do not need to replace their products whenever a new generation of hardware and software products is released.

Figure 4: Scheduler Services.



## Minimum Systems Requirements

### Minimum Hardware Platform

- *Optivity Telephony Manager for Meridian SL-100 Server*
  - 500 MHz Pentium II or Pentium III processor or equivalent required, Pentium III recommended
  - 128 MB of RAM minimum, 256 MB recommended
  - 150 MB of available hard drive space minimum, up to 2 GB additional hard drive space for database capacity recommended
  - Color monitor, mouse, and network interface card
- *Optivity Telephony Manager for Meridian SL-100 Client*
  - Intel Pentium II or Pentium III processor (or equivalent), 300 MHz or faster CPU
  - 128 MB of RAM minimum, 256 MB recommended
  - 100 MB of available hard drive space minimum, up to 500 MB of free space plus customer data storage requirements is recommended
  - Color monitor, mouse, and network interface card

### Software Platform

- *Optivity Telephony Manager for Meridian SL-100 Server*
  - Windows NT Server 4.0 with SP5
- *Optivity Telephony Manager for Meridian SL-100 Client*
  - Windows NT Workstation 4.0 with SP5, or Windows 98, or Windows 95

### Network Requirements

- *Optivity Telephony Manager for Meridian SL-100 Server*

The Optivity Telephony Manager for Meridian SL-100 Server must be connected to the enterprise LAN with a path to the Meridian SL-100 Ethernet Interface Unit (EIU). It is strongly recommended that the server be on the same LAN segment as the Meridian SL-100 EIU. The LAN segment that both systems are on should be protected by a firewall, and should be accessible only to persons authorized to perform Operation, Administration, Maintenance, and Provisioning (OAM&P) tasks on the Meridian SL-100.
- *Optivity Telephony Manager for Meridian SL-100 Client*

The client must be connected to the enterprise LAN with a path to Optivity Telephony Manager for Meridian SL-100 Server.

## Ordering Information

Standard software delivery for Optivity Telephony Manager for Meridian SL-100 is via CD-ROM. The CD includes all features and applications supported within Optivity Telephony Manager.

CD-ROMs will only be shipped with the initial purchase of Optivity Telephony Manager for Meridian SL-100. Initial licensing will allow up to 25 users (clients) to install the software. Additional licensing fees will be required for subsequent groups of users in increments of 25.

A soft copy of the Optivity Telephony Manager User Guide is included on the CD-ROM.

## Acronym Glossary

|                  |                                                                 |
|------------------|-----------------------------------------------------------------|
| <b>CPU</b>       | <b>Central Processing Unit</b>                                  |
| <b>DNs</b>       | <b>Directory Numbers</b>                                        |
| <b>EIPE</b>      | <b>Enhanced Intelligent Peripheral Equipment</b>                |
| <b>EIU</b>       | <b>Ethernet Interface Unit</b>                                  |
| <b>GB</b>        | <b>Gigabyte</b>                                                 |
| <b>IP</b>        | <b>Internet Protocol</b>                                        |
| <b>JRE</b>       | <b>Java Runtime Environment</b>                                 |
| <b>LAN</b>       | <b>Local Area Network</b>                                       |
| <b>LENs</b>      | <b>Line Equipment Numbers</b>                                   |
| <b>MB</b>        | <b>Megabyte</b>                                                 |
| <b>MHz</b>       | <b>Megahertz</b>                                                |
| <b>OAM&amp;P</b> | <b>Operation, Administration, Maintenance, and Provisioning</b> |
| <b>OODBMS</b>    | <b>Object-Oriented Database Management System</b>               |
| <b>PBX</b>       | <b>Private Branch Exchange</b>                                  |
| <b>QoS</b>       | <b>Quality of Service</b>                                       |
| <b>RAM</b>       | <b>Random Access Memory</b>                                     |
| <b>SNMP</b>      | <b>Simple Network Management Protocol</b>                       |
| <b>WAN</b>       | <b>Wide Area Network</b>                                        |



For more information, contact your Nortel Networks representative or call 1-800-4-NORTEL.

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